

IN THE SPECIFICATION:

Please replace paragraph 2 at page 1 continuing onto page 2, with the following rewritten paragraph:

Hormones, lipid soluble vitamins and the like play an important role in homeostatic maintenance, energy metabolism, differentiation, growth and the like of organisms. Receptors such as of these hormones and the like are transcription control factors existing in nuclei and bind with particular sites of chromatin DNA to control the transcription reaction of genes. In most cases, where ligands such as hormones and the like do not bind with receptors, transcription is repressed from occurring. Once a ligand, such as a hormone, binds to a receptor, the transcription is activated through a change of a chromatin structure. It has been reported that many factors called co-activators and co-repressors work to form complexes on the way to a transcriptor from a nuclear receptor. An unliganded receptor binds to a co-repressor containing a histone deacetylase, thereby repressing gene expression. On the other hand, when the receptor structure is changed through binding with a ligand, the co-repressor complex is released and, instead, a co-activator complex containing a histone acetylase is recruited. Mention is made, as an instance of such a co-activator, of Skip (i.e. Ski interacting protein, and also called N-CoA62), which is directly bound to several types of nuclear receptors (e.g. vitamin 3 receptor, retinoic acid receptor, estrogen receptor and ~~glucocorticoid~~ glucocorticoid receptor) to strengthen the gene expression transmitted through these nuclear receptors (Baudino, T.A., Kraichely, D.M., Jefcoat, S.C., Jr., Winchester, S. K., Partridge, N.C., and MacDonald, P.N. (1998) J. Biol Chem 273(26), 16434-41, MacDonald, P.N., Baudino, T.A., Tokumaru, H., Dowd, D.R., and Zhang, C. (2001) Steroids 66(3-5), 171-6).

Please replace paragraph 9 at page 7 continuing onto page 8, with the following rewritten paragraph:

The embodiments of the invention are described in more detail. The abbreviations used in this specification are illustrated beforehand: HAT (histone acetyltransferase or histone acetylase); HDAC (histone deacetylase or histone deacetylizing enzyme); DAPI (~~4',6-diamidino-2-phenylindole~~) (4',6-diamidino-2-phenylindole); RAR (retinoic acid receptor); GR (glucocorticoid receptor); DBD (DNA-binding domain); AD (activated domain); and ATRA (all-trans retinoic acid).

Please replace paragraph 5 at page 33 continuing onto page 34, with the following rewritten paragraph:

FIG. 7B shows the localization of HDART in viable cells. The results of observation of fluorescence caused by GFP after introduction of a GFP-HDART expression vector (upper left) or a GFP expression vector (lower left) into Hela cells, and the results of visualized the nucleus using the ~~Hoechst~~ Hoechst 33342 dye (upper right) are shown.

Please replace paragraph 2 at page 37, with the following rewritten paragraph:

Human homologs of Drosophila crn gene using BLAST data base were checked, revealing that the clone #52930 of human EST (expressed sequence tag) derived from the pancreas island has high homology with the crn gene. The perfect sequence of the clone ~~w52930~~ #52930 was determined in a usual manner. Moreover, according to the 5'-RACE procedure (5'-rapid amplification of cDNA ends strategy), this gene was identified as having a full length of cDNA consisting of 2660 bases with one long reading frame. It will be noted that the identified protein functions as a repressor after binding to HDAC (histone deacetylase) as will be described hereinafter and thus is called "HDART (a HDAC associated repressor TPR)" protein. HDART

is a highly conserved TPR protein coded with 855 amino acid (FIG. 1). The HDART human protein deduced from the DNA sequence apparently indicates a resemblance to human CRN protein. Especially, the region ranging from 262 residue to 779 residue of the HDART human protein is highly conserved in the HDART and CRN protein (FIGS. 1, 2). The genetic analyses of the proteins over several species revealed that these formed a genetic family (FIG. 3).

Please replace paragraph 1 at page 44, with the following rewritten paragraph:

Since it is shown in the above example that HDART is able to interact with Skip, a functional role of HDART against the transcription route ascribed to a nuclear receptor was analyzed. Initially, the action of HDART on the transcription control with retinoic acid receptor was analyzed. For this purpose, the CAT analysis was made in such a way that RAR (~~retinoid acid receptor~~) (retinoic acid receptor) incorporating a thymidine kinase minimum promoter (pTREpal-tata) and CAT gene therein is used downstream of a retinoid response element is employed.